ON A CARBONIFEROUS AMMONITE FROM TEXAS.

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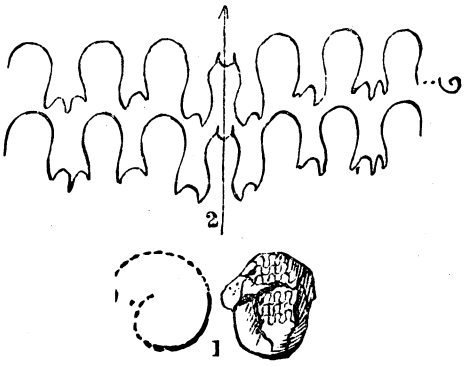
Among a limited number of carboniferous fossils obtained from the border of Wise County, Texas, and submitted to me for examination by my friend, Mr. G. Howard Parker, a form occurs which can unhesitatingly be referred to the family *Ammonitidæ*, and to the old genus *Ammonites*. Only a fragment of a single individual of the form in question is to be found, and this, unfortunately, has lost the shell, so that no external ornamentation, if any such existed, can now be detected. What there is of the specimen, however, sufficiently indicates that it was smooth, or destitute of ribs, and that the decidedly globose form was marked by a strong involution of the whorls, which appear almost completely embracing. The umbilical region cannot be clearly made out. The sutural lines of the septa are very clearly defined, and exhibit the ammonitic foliations in very nearly their simplest expression. The lobes and saddles are numerous and closely packed, the general appearance presented by them to the unassisted eye being that of tessellation.



1. Fragments, natural size. 2. Septal sutures, magnified.

The siphonal lobe is considerably the largest, and is split into two prominent tongues by the extension inwards of a deep sinus having approximately the same width as the lateral prongs; the lateral prongs terminate each in two teeth, the inner one of which, counting from the siphonal line, is somewhat longer than the external; the base of the lobal sinus produced anteriorly into two acute sulci. The first lateral lobe terminates in two teeth, the inner or siphonal one the shorter, truncated at the extremity, and sometimes exhibiting indications of apical division;

the second lateral lobes with three teeth, the median one of which is the longest. The saddles are simply rounded, and exhibit, as far as can be seen in the specimen, no traces of crenulation or denticulation along the anterior margin.

This is the first Ammonite, as far as I am aware, that has been detected in any American formation below the mesozoic series. The association with it of characteristic palæozoic forms of life, such as *Zaphrentis*, *Phillipsia*, *Bellerophon*, *Conularia*, *Chonetes*, and *Productus*, leaves no doubt as to its position, and hence we must conclude that here, as well as in India, where Waagen first announced the occurrence of true carboniferous ammonitic forms, the distribution of this highly characteristic group of organisms was not so rigidly defined by the mesozoic line as geologists had been led to conclude. That pre-mesozoic Ammonites will be discovered elsewhere besides in India and Texas there is no reason to doubt; indeed, no assumption could be more illogical than the contrary—and, therefore, the present discovery is in no way specially surprising, and only rather interesting than important. Special interest, however, attaches to this form, as through it and the individuals or fragments of individuals that have been found in the Tejon (Tertiary) rocks of California,[1] we have established in this country the extreme range of the group which it represents.

As to the relationship of the species which I propose to designate *Ammonites Parkeri*, it may be stated that, judged by such characters as the fragment presents, a position must be assigned to it near to *A. antiquus*, Waag., from the Productus-limestone (Salt-Range), of Kufri, India, described and figured in the *Palæontologia Indica* (ser. xiii, pp. 28-9, 1879), of the Geological Survey, and which Waagen refers to the genus *Arcestes* of Suess. A comparison between the septal sutures of our specimen and the Indian one shows a remarkable similarity, indeed, one might almost say identity, existing between the two, the type of structure being practically the same. The principal difference seems to be some very slight and unimportant modification in the lobal denticulations, and the emargination or depression which exists in the saddle, or rather in some of the saddles of the Indian

[1] Heilprin, "On the Age of the Tejon Rocks of California, and the Occurrence of Ammonitic Rema ns in Tertiary Deposits." Proc. Acad. Nat. Sciences of Philadelphia, July, 1882.

species. The acicular sulci which terminate the sinus in the siphonal or median lobe do not appear in Waagen's drawing, but as this is done on a small scale, the feature in question may have been overlooked. In either case the septal plication is about equally simple or primitive, and indicates a passage by which a transition is effected from the more complicated forms to the still simpler Goniatite. The discussion of the relationship existing between the *A. antiquus* and certain Goniatitic forms described by De Verneuil and Karpinsky from the sandstone of Artinsk, equally applicable in its reference to the American species, is fully set forth by Waagen (*loc. cit.*).